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CLAIMS

1. Mixing apparatus comprising a batch mixing vessel having an inlet to receive constituent material, an agitation assembly for mixing the constituents within the vessel and an outlet to convey batches of mixed material; the apparatus further comprising means for pressurising the mixing vessel to assist in evacuation of the mixed constituents from the outlet, and a batch loading means including a conduit through which the constituents are conveyed in use by fluid flow means; wherein a single pneumatic source is used both to pressurize the mixing vessel and to drive a jet pump comprising the batch loading means.

2. Apparatus according to claim 1 where the mixing vessel is generally spherical.

3. Apparatus according to claim 1 or claim 2 wherein the mixing vessel is provided with clamping means for preventing accidental lifting of a lid or the inlet when the vessel is under vacuum.

4. Apparatus according to any one of the preceding claims wherein the batch loading means comprises a conduit.

5. Apparatus according to claim 4 wherein the batch loading means comprises an inlet suction conduit assembly which includes adjustment means, such that the effective length of the conduit assembly can be varied in use.

6. Apparatus according to claim 5 wherein the conduit assembly comprises a section which is capable of telescopic movement.

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7. Apparatus according to any one of claims 4 to 6 wherein the conduit assembly is provided with means operable to vibrate the intake.

5 8. Apparatus according to any one of claims the preceding wherein an airflow is provided in the flow discharged from the mixing result.

10 9. Apparatus according to any one of the preceding claims wherein the mixing vessel is provided with a level sensor.

10. Apparatus according to claim 9 wherein the level sensor is an oscillating-vane level sensor.

15 11. Apparatus according to any one of the preceding claims wherein the agitation assembly comprised mixing paddles.

20 12. Apparatus according to any one of the preceding claims wherein the agitation assembly hydraulically driven.

25 13. A mixing vessel for mixing apparatus comprising a sealable charging inlet for loading constituents to be mixed, and an outlet for discharging the mixed constituents, and means for pressurizing the vessel; wherein the mixing vessel is generally spherical.

30 14. A vessel according to claim 13 further comprising an internal protective liner comprising two or more segments.

35 15. A vessel according to claim 13 or 14 comprising clamping means for preventing accidental lifting of the lid/cover when the vessel is under vacuum.